ABSTRACT OF THE DISCLOSURE

A memory control device and a method of controlling memory transfer. The memory control device has a command decoding device, a compare logic device, a decision device, a frame buffer decode device, a frame buffer range device and a command routing device. The frame buffer range device is used to determine if the access address pointed to a graphic memory. The command-decoding device and the compare logic device are used to determine if the access address points to a memory bank range having an error-check-correction function. The decision device is used to determine if the access address points to a memory bank range having error-check-correction function but outside the graphic memory range. If the access address points to a memory bank range having error-check-correction function but outside the graphic memory range, a memory access command with error checking and correction of data is executed.